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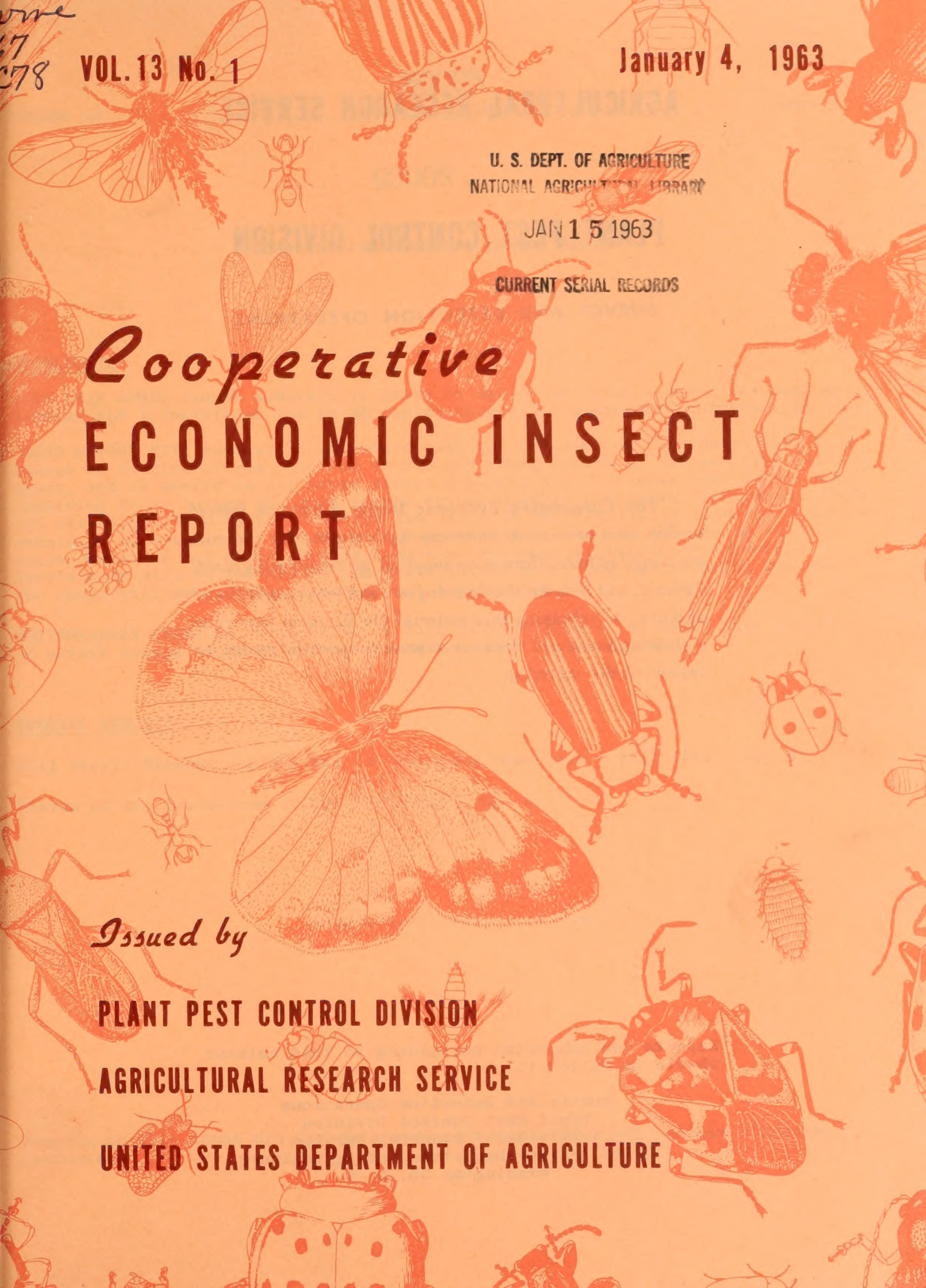

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Survey and Detection Operations
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Volume 13 January 4, 1963 Number 1

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

CORN LEAF APHID ranged moderate to heavy on barley in Artesia area, New Mexico. HESSIAN FLY infestations low in 38 fields checked in 5 Missouri counties. (p. 3).

TEXAS CITRUS MITE population at record high for December on Florida citrus. Cold damage to Florida citrus occurred in old and young groves at low and high elevations, and is severe in all areas except southern sections near east coast; most remaining fruit ruined and most leaves either dead or functionally injured. Mites not directly killed by cold; leaves and fruit in only partially injured condition remaining on trees, will continue to support mites. Effect of cold on scales, scale parasites and other species cannot be assessed at this time. Overall populations will be lowered in immediate future as drying and dropping leaves and fruit will mechanically remove pest species. (p. 3).

SUBTERRANEAN TERMITES very active in Salt River Valley of Arizona; many reports of severe damage to homes during period December 23-29. (p. 6).

SPECIAL REPORTS

Boll Weevil Hibernation Surveys in Texas and Tennessee - Fall 1962. (p. 4).

Status of the Screw-worm in the Southwest. (p. 5).

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Reports in this issue are for week ending December 28, 1962, unless otherwise indicated.

WEATHER BUREAU 30-DAY OUTLOOK

JANUARY 1963

The Weather Bureau's 30-day outlook for January calls for average temperatures to continue below seasonal normals over the eastern third of the Nation, with greatest departures in the Middle and North Atlantic States. Above-normal temperatures are expected to prevail over the northwest quarter of the country. In other areas, about normal temperature averages with large fluctuations are anticipated, except for below normal over the Far Southwest. Precipitation is expected to exceed normal over the southern half of the Nation lying east of the Continental Divide. Subnormal amounts are indicated in the north from the northern Plains eastward to the Appalachians, and also over the Far West. In unspecified areas, near normal amounts, mostly in the form of snow, are in prospect.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price $4.80 a year, $2.40 a half year.

WEATHER OF THE WEEK ENDING DECEMBER 31, 1962

Very cold temperatures over much of the Midwest and Far West and near nationwide precipitation began the period, in contrast to the concentrated storms in New England and the Pacific Northwest and generally open weather elsewhere at the close. In New England, one of the worst blizzards of recent times moved into the area on the 30th, with winds at a steady 40 m.p.h. or more. Sustained 66 m.p.h. winds, with a gust to 81 m.p.h., hit Blue Hill at Milton, Massachusetts. Travelers were stranded, communities were isolated by drifting snow, and powerlines were downed from winds, heavy snow and falling trees. Hardest hit were Maine and New Hampshire where the drifting 35-inch snowfall piled to over 20 feet high in many spots of central and eastern Maine. A daily newspaper, with a perfect 73-year record, in Bangor, Maine, missed publication because of a distribution factor. At the close of the week, the airport at Millenocket, Maine, had a measured snow depth of 45 inches. The hard freeze that blanketed most of the Far West during the period helped keep weekly averages below normal for the first time in 2 months for many areas. On the coast, Santa Maria, California, had freezing lows on the final 6 days, of which a 24° minimum on the 26th set a new monthly low. The only above-normal averages and significant precipitation in the Far West were in the Pacific Northwest. Snowfalls were mostly light and the cover generally remains quite shallow, but rainfall in Washington ranged over 4 inches along the north coast. Over the remainder of the country, temperatures averaged below normal except in Florida. The largest reported departure was 14° at Moline, Illinois. The cold air that crossed westward over the Rockies to cause such readings as a -44° at Fraser, Colorado, also poured over the Nation from the Great Plains eastward. Zero readings were observed in Oklahoma on the 26th, following early week snows to 4 inches throughout much of the Great Plains. The snow had mostly melted by the end.

Two storms, one in the southwest Great Plains, another in the northern Gulf, combined to spread precipitation east of a line from the southern Rockies to the Northern Plains States on the 24th-25th. Most of the area north of the states from Oklahoma into North Carolina had a white Christmas. Washington, D.C., recorded its largest Christmas Day snowfall, with 5.4 inches, since records began in 1888. The two systems got together in the southeast corner of the Nation and drifted up the east coast, moving into New England on the final day.

(Weather continued on page 6)

CEREAL AND FORAGE INSECTS

CORN LEAF APHID (Rhopalosiphum maidis) - NEW MEXICO - Moderate to heavy populations noted in barley fields in Artesia area, Eddy County. (N. M. Coop. Rpt.).

GREENBUG (Toxoptera graminum) - OKLAHOMA - Scattered, noneconomic to light populations noted in small grains checked in Noble, Kay, Alfalfa, Garfield and Grant Counties. (Kunz, Owens, Dec. 22). ALABAMA - Averaged 6 per linear foot of row in Barbour County. (Buttram, Dec. 21).

HESSIAN FLY (Phytophaga destructor) - MISSOURI - Average percent infestation in several fields checked, by county, was as follows: Barton - 0.2 in 9 fields; Carroll - zero in 8 fields; Lafayette - 3.0 in 4 fields; Holt - 1.8 in 9 fields; Ralls - 2.7 in 8 fields. Some of these fields planted too late for fall infestation. (J. D. Munson).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - ALABAMA - Adults averaged 2 per 100 sweeps in field of oats in Barbour County. (Buttram, Dec. 21).

FRUIT INSECTS

Citrus Insect Situation in Florida - Mid-December - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 60 percent of groves (norm 71 percent); 32 percent economic (norm 50 percent). Populations below normal and similar for both leaves and fruit. Highest district was upper east coast. TEXAS CITRUS MITE (Eutetranychus banksi) infested 54 percent of groves (norm 26 percent); 26 percent economic (norm 9 percent). Population at record high for December, with highest districts being Gainesville and Indian River. CITRUS RED MITE (Panonychus citri) infested 38 percent of groves (norm 59 percent); 13 percent economic (norm 26 percent). Infestations were very light. Only high district was west coast. SIX-SPOTTED MITE (Eotetranychus sexmaculatus) was seen in 2 percent of groves. SCALE populations were near level reported in November.

On the nights of December 12-13 and December 13-14, central Florida had 12-18 hours below freezing and 7-9 hours below 26°F. Cold damage occurred in old and young groves and at both low and high elevations. It is severe in all areas (except southern areas close to east coast). It is too early to evaluate tree damage, but most of the remaining fruit is ruined and most leaves are either dead or functionally injured.

Outlook - Mites were not directly killed by the cold. Leaves and fruit that remain on trees in only partially injured condition will continue to support mites. The effect of cold on scales, scale parasites and other species cannot be assessed at this time. Overall populations will be lowered in the immediate future simply because the drying and dropping of leaves and fruit will mechanically remove the pest species. (W. A. Simanton (Citrus Expt. Sta., Lake Alfred)).

ORANGE-DOG (Papilio cresphontes) - ARIZONA - Reported from many backyard citrus plantings in Salt River Valley during period December 8-14. (Ariz. Coop. Sur.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - NEW MEXICO - Live larvae continue to be found in bolls on standing stalks in cotton fields near Malaga, Eddy County. (N. M. Coop. Rpt.).

BOLL WEEVIL HIBERNATION SURVEYS IN TEXAS AND TENNESSEE - FALL 1962

TEXAS - Fall collections of surface woods trash were made in Falls, Hill, Limestone and McLennan Counties December 10-18, 1962, to determine the number of boll weevil (Anthonomus grandis) adults that went into hibernation. Each sample consisted of 2 square yards of trash, with 3 samples taken from each location and either 6 or 7 locations being sampled in each county. Collections were made from locations which could be resampled in the spring of 1963. A total of 75 samples was taken from 25 locations in the 4 counties. The average number of live weevils found per acre in Falls, Hill, Limestone and McLennan Counties was 2,285, 1,613, 1,882 and 1,380, respectively, compared with 2,957, 4,032, 2,957 and 6,095 for 1961, and 7,646, 3,485, 2,710 and 4,259 for 1960. The area average of 1,781 weevils per acre in the fall of 1962 compares with 4,114 in 1961 and 4,501 in 1960.

The sharp decrease in numbers of boll weevils entering hibernation in the fall of 1962 was due primarily to hot, dry weather during July and August, which resulted in early maturity, harvest and stalk destruction. (C. B. Cowan).

TENNESSEE - The regular fall survey was made in McNairy County to determine the number of boll weevil adults that went into hibernation in 1962. This county was selected as it usually represents the infestation for the southern tier of counties. Samples were taken in environs of fields known to be infested early during the 1962 growing season, and before the severe cold weather in early December. A total of 12 samples was taken, each consisting of 2 square yards of surface trash. From these 12 samples 18 live weevils were found, indicating an average of 3,633 live weevils per acre. This is the largest number of weevils found in hibernation since the beginning of the survey in 1951, and compared with 3,025 per acre in 1961 and 2,622 in 1960.

The average winter carryover during the past 11 years has been approximately one-third the number found during fall survey. This would indicate that in all probability there will be a rather large number of boll weevils to infest cotton in the southern counties during 1963. A followup survey will be made prior to planting time to determine the number of weevils present to infest the 1963 cotton crop. (J. H. Locke).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A TARSONEMID MITE (Tarsonemus sertifer) - CALIFORNIA - Medium to heavy on blue oak in Woodside, San Mateo County. (Cal. Coop. Rpt.).

AN ANOBIID BEETLE (Vrilletta decorata) - CALIFORNIA - Larvae and adults medium in twigs of locust trees in Watsonville, Santa Cruz County. (Cal. Coop. Rpt., Dec. 21).

COTTONY-CUSHION SCALE (Icerya purchasi) - ARIZONA - Infesting pittosporum in Phoenix area. Vedalia (Rodolia cardinalis) active in several of these infestations prior to advent of cooler weather. (Ariz. Coop. Sur.).

COCCIDS (Ceroplastes spp.) - NORTH CAROLINA - C. ceriferus troublesome at location in Forsyth County. (Wray). Ceroplastes sp. infesting holly in same county. Infestation scattered throughout housing development, with approximately 60 plants involved. (Robertson).

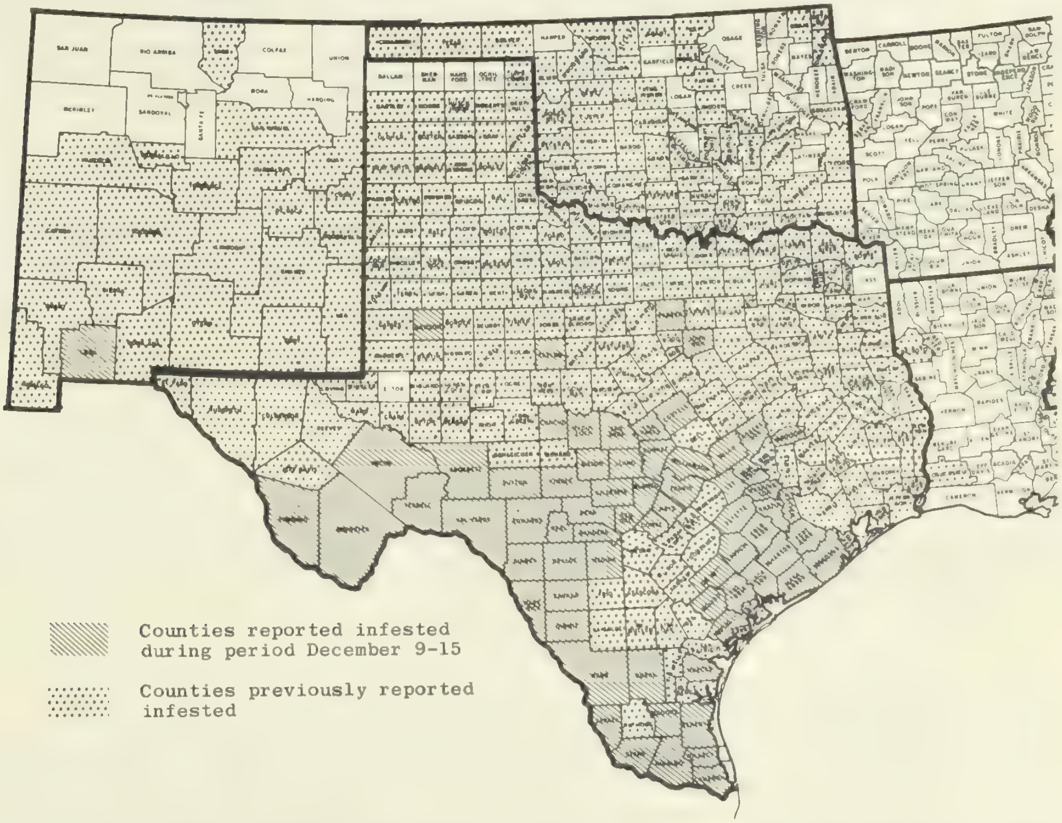
CUBAN-LAUREL THRIPS (Gynaikothrips ficorum) - CALIFORNIA - Medium infestation on an unknown host at Thousand Palms is apparently new record for Riverside County. (Cal. Coop. Rpt.).

A YUCCA THRIPS (Bagnalliella yuccae) - CALIFORNIA - Adult numbers medium on Yucca sp. in Ontario, San Bernardino County. (Cal. Coop. Rpt., Dec. 21).

INSECTS AFFECTING MAN AND ANIMALS

STATUS OF THE SCREW-WORM (Cochliomyia hominivorax) IN THE SOUTHWEST

A total of 64,290,650 sterile flies was released during the period December 9-15 and 312 screw-worm cases were reported during this period. The areas of fly release are now in process of being changed so that barrier of sterile flies along the United States-Mexican border will receive an average of 600 sterile flies per square mile each week, and the inner half an average of 400 flies per square mile each week. Area to be included in the barrier zone will be approximately 100,000 square miles, with an estimated requirement of 50 million sterile flies each week during remainder of the fiscal year. Fly release will continue within present drop area except when weather will force intermittent cessation of treatment in northern half. Present drop area outside the barrier will receive varying release rates depending on weather conditions and intensity of populations. It is estimated that an average of 200 flies per square mile will be sufficient until it is ascertained that adults have not overwintered in the area. In the southern part of Texas, where it is believed screw-worm will probably overwinter, release rates will be increased as inclement weather reduces the size of the area under treatment. (Anim. Dis. Erad. Div.).


▨ Counties reported infested during period December 9-15
⠿ Counties previously reported infested

COMMON CATTLE GRUB (Hypoderma lineatum) - ARKANSAS - Control of this species continues to progress. Herds checked in 6 northwest counties show very few grubs in treated animals. Only 43 grubs found in 291 treated animals, for average of 0.15 grub per animal; ranged 0-4. In untreated herds, 272 grubs found in 94 animals, for average of 2.89 per animal; ranged 0-27. (Barnes).

CATTLE LICE - UTAH - Heavy on several cattle near Duchesne, Duchesne County. (Knowlton).

HOUSEHOLD AND STRUCTURAL INSECTS

SUBTERRANEAN TERMITES (*Reticulitermes* spp.) - ARIZONA - Very active in Salt River Valley; many reports of severe damage to homes received during period December 23-29. (Ariz. Coop. Sur.).

LARGER YELLOW ANT (*Acanthomyops interjectus*) - NORTH CAROLINA - Probably this species, of concern at a locality in Chowan County, December 3. Det. by R. C. Axtell. (Mount).

STORED-PRODUCT INSECTS

RICE WEEVIL (*Sitophilus oryzae*) - OKLAHOMA - Heavy populations active in barley checked in Marshall County. Light populations noted in grain sorghum and oats. (Kunz, Vinson).

CONFUSED FLOUR BEETLE (*Tribolium confusum*) - OKLAHOMA - Heavy in ground corn in Love County; light numbers noted in oats in Marshall County. (Kunz, Vinson).

PHYCITID MOTHS - CALIFORNIA - Populations of *Ephestiodes gilvescentella* occurring in raisins in experimental storage survived one year in raisins and now considered possible pest of this product. Adults now being held in culture to determine if they can be reared under laboratory conditions. (H. Nelson). NORTH CAROLINA - *Ephestia* sp. larvae infested sunflower seed in Buncombe County. (Mount).

BENEFICIAL INSECTS

A LADY BEETLE (*Coleomagilla maculata fuscilabris*) - ALABAMA - Rather heavy populations found hibernating around pecan and pine trees surrounded by corn and/or cotton fields in Lee, Bullock and Barbour Counties. (Buttram, Dec. 21).

MISCELLANEOUS INSECTS

CITRUS WHITEFLY (*Dialeurodes citri*) - CALIFORNIA - Continuing delimiting surveys in City of Sacramento show over 200 blocks infested. (Cal. Coop. Rpt.).

A SPRINGTAIL (*Achorutes nivicola*) - PENNSYLVANIA - Very abundant around bases of trees and on snow December 26 at Meadville, Crawford County, and December 27 at Tionesta, Forest County. (Adams).

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Weather of the week ending December 31, 1962 (continued from page 2)

Precipitation fell on 5 of the 7 days from Texas eastward, along the Appalachians, over most of the Great Lakes and the Northeast. Totals were generally over 0.50 inch southeast of a line from southern and eastern Texas across New England, except for southern Florida. Within this area 1-inch totals were numerous, but the area of largest falls was along the central Gulf and up into central Mississippi. Donaldsonville, Louisiana, reported the most, with 5.54 inches. (Summary supplied by U. S. Weather Bureau).

Survey Method for Rice Stink Bug (_Oebalus_ _pugnax_ _pugnax_) As Used in Arkansas [1]

Various methods of survey for the rice stink bug were studied in Arkansas from 1959 through 1962. A special study of biology, seasonal development and alternate hosts was made in 1959 and 1960.

The sweep net may be used to collect bugs to determine numbers present and seasonal development. This method, however, has disadvantages as the growing season develops. The development of this species within a rice field is associated with the presence of barnyard grass, _Echinochloa_ _crusgalli_, on which the bugs feed prior to the heading of the rice. As the rice heads develop, dispersal of bugs to rice occurs; however, feeding may continue on grass. The sweep net collects bugs from both rice and grass and may not give a true picture of the bug population actually feeding on rice. Another disadvantage is the difficulty of the surveyor walking in the tall plants and flooded fields. Field coverage is difficult and some bugs fly ahead of the surveyor due to being disturbed.

The methods adopted in Arkansas are the use of binoculars and "eyeballing." The surveyor walks the levees to obtain field coverage. At least 10 stops for observation are made in each field. At each stop the surveyor focuses the binoculars on 10 heads of rice located at sufficient distance so that the bugs have not been disturbed and counts the bugs seen. While looking at the same 10 heads the surveyor moves a few steps in order to change the angle of observation, enabling him to see bugs that may have been hidden from view at the first stop. In the "eyeballing" method the same procedure is followed. In order to keep his vision on the same 10 heads of rice while counting, the surveyor holds out his hand and uses it as a focusing point. With this method bugs can be seen at a sufficient distance so that the surveyor will not disturb them from the vantage point on the levee; however, the use of binoculars is preferred. Counts are recorded in terms of bugs per 100 heads of rice.

The binoculars used in Arkansas are 6 X 30.

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[1] Method developed by Glyn Odglen and Dr. L. H. Rolston, Dept. of Entomology, Div. of Agriculture, University of Arkansas; Grover C. Dowell, Extension Entomologist, and W. P. Boyer, Survey Entomologist.

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